W. H. FOGETTE.

Shaking and Dumping Grate-Bars.

No. 220,969. Patented Oct. 28, 1879.

Fig 1

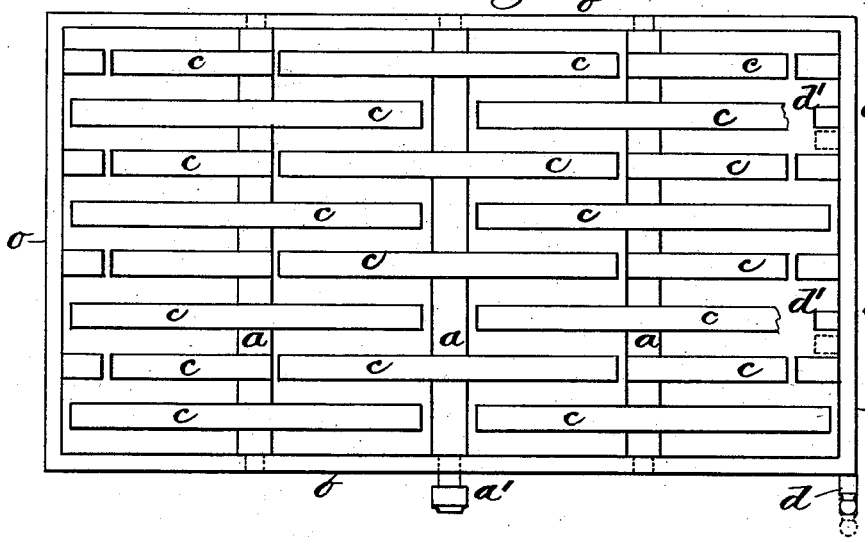


Fig 2

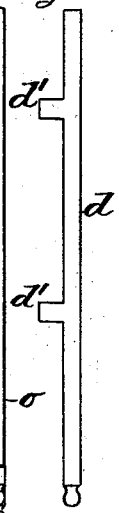
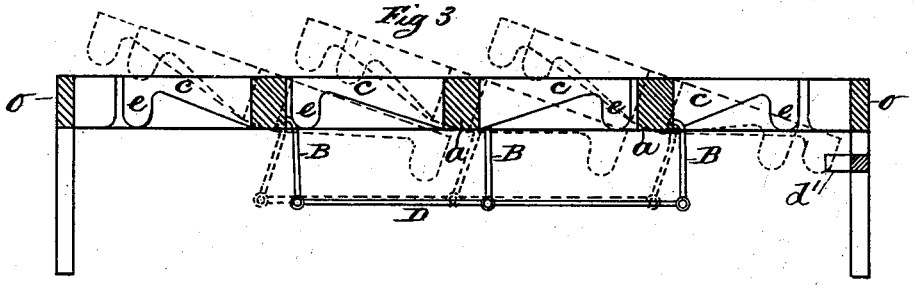


Fig 3



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WILLIAM H. FOGETTE, OF SPRINGFIELD, MASSACHUSETTS.

IMPROVEMENT IN SHAKING AND DUMPING GRATE-BARS.

Specification forming part of Letters Patent No. **220,969**, dated October 28, 1879; application filed July 29, 1879.

To all whom it may concern:

Be it known that I, WM. H. FOGETTE, of Springfield, county of Hampden, and State of Massachusetts, have invented new and useful Improvements in Shaking and Dumping Grate-Bars, which improvements are fully set forth in the annexed specification, and in the accompanying drawings.

The object of my invention is to provide an improved grate-bar for fire-places and other similar uses, so constructed that, practically, the whole grate-surface can be shaken, and under such conditions that no risk of dumping the fire is incurred while so doing, and in which provision is made against the liability to obstructions from coal and clinkers while shaking.

My invention consists in constructing the ends of my grate-bars with short downwardly-projecting arms, standing about at right angles to the upper edge of the bar, said bars being fixed to rocking shafts set across the grate-frame, forming series of rocking grate-bars, interlocking with each other, their rock-shafts having connecting-rod arms thereon, and arranged to be connected so as to rock together in the usual manner, and having a suitable stop inserted in the frame supporting the series of bars, by which the bars are prevented from being accidentally dumped while being shaken, and to provide an abutment against which the ends of the bars strike while the grate is being shaken, thereby more effectually shaking the ashes out from the coal.

Referring to the drawings, Figure 1 is a plan view of my grate. Fig. 2 is a view of the grate-stop, and Fig. 3 is a longitudinal section of the grate.

In the drawings, *a* are rock-shafts, carrying series of grate-bars *c*. *a'* is an end of one of rock-shafts *a*, projecting beyond the grate-frame. *d* is a sliding stop-bar. *d'* are projections on bar *d*. *e* are short arms on bars *c*. B are connecting-rod arms on shafts *a*. D is a connecting-rod.

It is desirable in grates of this class that they should be so constructed that while being operated coal and clinkers cannot drop between the ends of the bars and adjacent rock-shafts. To obviate that difficulty I form my bars *c* with the down-projecting lugs *e* on their ends sufficiently long to permit the ends to swing up and down for shaking, and at the same time not lifting far enough above the top of the rock-shafts *a* to permit obstructions to enter between them.

It is obvious that the width of the grate-bar where it joins the rock-shaft might be extended to its end, thereby producing the requisite width at that point to effect the purpose of the lug *e*; but such a form would involve greater and unnecessary weight.

The rock-shafts are made of proper form near their ends to fit in frame *o*, and rock therein in the usual manner, and they are connected together by arms B thereon and connecting-rod D, so that a rocking motion in one causes all to rock simultaneously in the same direction.

Arranged to slide transversely in frame *o* is a stop-bar, *d*, placed below the ends of bars *c*. On said stop-bar, projecting out under the ends of said bars, are short arms *d'*.

On the end of one of rock-shafts *a* is a projecting end, *a'*, arranged to receive a suitable shaking-wrench.

The grate, constructed as shown in Figs. 1 and 3, is shaken by applying a wrench to the end *a'* of shaft *a*, and stop-bar *d* being in the position shown in Fig. 1, the ends of bars *c*, which are shown broken off, will strike against the top side of arms *d'* on the stop-bar, and thus the grates cannot be oscillated too far, and the shock occasioned by so striking arms *d'* causes the ashes to fall more effectually.

By drawing stop-bar *d* out, as shown in dotted lines in Fig. 1, the grates may be dumped.

What I claim as my invention is—

1. The combination, with a series of grate-bars arranged upon rock-shafts, as set forth, of the sliding stop-bar *d*, having on it one or more arms, *d'*, substantially as and for the purpose specified.

2. The combination, with a series of rocking grate-bars provided with the short arms *e* under their ends, of the sliding stop-bar *d*, having on it one or more arms, *d'*, substantially as set forth.

WILLIAM HENRI FOGETTE.

In presence of—

H. A. CHAPIN,

WM. H. CHAPIN.